

NEW VARIETIES OF NORTH AMERICAN PISIDIA.—2.

BY V. STERKI.

(Continued.)

Pisidium variable Pr. var. *brevius* n. Much shorter than the usual form, oblique, moderately to well inflated, beaks comparatively large, generally slightly flattened on top; color darker; so far as known, the mussels are usually smaller. This *Pisidium* is considerably different from the "typical" form, and an analogue of *P. compressum* var. *confertum*.

Hab.: Michigan: Houghton Lake; Gogebic Lake and Slate River to same, Carp River and Lake, Ontonagon Co., Walker; Crystal Lake (Dr. Kirkland); Minnesota: Clear Water Lake (Sargent); Keewatin: Attawapiskat River (McInnes, sent by Whiteaves).

Var. *hybridum* n. Smaller than average *variable*, of nearly the same shape; but the shape of the beaks, surface appearance, color and opacity of the shell are those of *Pis. æquilaterale* Pr. This is an interesting form, and might be taken for a hybrid between the two species, both of which were found at the same places; but it is markedly constant, so far as known.

Vicinity of Mohawk, N. Y.: Wide Water Canal (Jas. Lewis collection, now Mr. Bryant Walker's), Chepachet Pond (received from Mr. H. E. Sargent).

There are some other forms of *Pis. variable*, rather characteristic and constant, and with more material will probably prove real varieties. Even the more typical form is rather variable with respect to size, shape, striation, color, thickness of shell and hinge.

Pisidium noveboracense Pr. The form regarded as typical seems to be common in New York, Pennsylvania and Ohio, prevalent in springs and small brooks. But the species is almost endlessly variable and seems to readily respond, in that respect, to various kinds of habitat, so that it often seems impossible to decide whether a certain form has to be ranged under it or not. But there are a number of forms characteristic and more or less constant, and must be described as varieties.

Var. *expansum*, n. Anterior part of the mussel higher; supero-anterior slope more curved, anterior end more rounded; postero-inferior curve generally broader; outlines in general more rounded; more regularly inflated, beaks less prominent, young specimens less

inflated comparatively, and of characteristic shape; surface with very fine, more regular striation, and generally more even dullish; color grayish to brownish, whitish to straw-colored in the young but soon changing.

Various places in Michigan: Grand river, Lamberton creek, a small stream, etc. (Kent co., Dr. Kirkland); a very similar form from a ditch on Cameron Run near Alexandria, Va. (Sterki).

Var. elevatum, n. Smaller than the type, shorter, well inflated, anterior part higher, anterior end more rounded; superior margin, slightly or scarcely curved with sharply projecting angles before and behind, which are, however obsolete in some specimens; color straw to yellowish-horn. This is quite a characteristic form but seems connected with the type by intermediate specimens.

Creek and pond at Castalia, Erie co., Ohio (Sterki), Joliet, Ill. (Ferris and Handwerk); similar forms from other places.

Var. quadrulum n. Smaller, slighter, of more quadrate outlines but with no sharp projecting angles; supero-anterior slope rather steep; beaks not much prominent; surface with rather fine, somewhat irregular striæ; color pale to grayish-horn; shell thin and somewhat translucent, hinge rather slight.

This *Pisidium* appeared to be distinct from *noveboracense*; yet intermediate forms may be found. It is a form of ditches and marshes, and widely distributed, as it seems; quite common, *e. g.*, in the vicinity of New Philadelphia, Ohio (Sterki).

A larger form, stouter, higher, more inflated, with the shell scarcely translucent, was called *proclive*; it may prove to be a real variety. Ditches, New Philadelphia, O., and similar forms from other places.

Var. lineatum n. Smaller, shorter, somewhat oblique, moderately inflated, especially so towards the inferior margin, somewhat triangular in outlines; beaks narrow, little prominent; surface with rather fine, subregular striæ, and usually with a few fine lines, dark lines of growth; color straw to yellowish, horn to reddish; shell and hinge rather slight.

Reed Lake, Michigan (Dr. Kirkland), and similar forms from elsewhere. This is somewhat analogous to *Pis. compressum* var. *rostratum*, of the same lake, and it may be noted that the same is inhabited by nearly typical forms as well as several rather different forms, or varieties of both species; at least one of each has not been described here.

Var. *fraternum*, n. Less elevated; superior and inferior margins slightly curved, and the former long; beaks not much prominent; surface with irregular, shallow striæ, shining; color horn to yellowish-horn, usually in irregular, alternating zones, also more or less translucent. In its surface appearance it resembles the "eastern form" of *Pis. abditum* Hald.

New Philadelphia, and Akron, Ohio (Sterki); similar but smaller forms from Kent Co., Mich. (Dr. Kirkland).

Var. *alabamense*, n. Higher; beaks quite prominent; superior margin more curved and sloping down into the anterior and posterior without or with slightly prominent, rounded angles; mussel rather large and well, regularly inflated; surface with rather sharp, sub-regular striæ, slightly shining to dull, and microscopically rugulose; color yellowish to grayish-horn; size, long. 6, alt. 5, diam. 4.6 mm., a few even larger, but most specimens are smaller.

Hab.: Alabama, along the Coosa river, common (H. H. Smith), Tennessee river (Sargent, Hinkley), Columbus, Mississippi (Hinkley).

This *Pisidium* is rather variable. While most specimens are as described, and appear to represent a distinct species, others approach the "typical" New York and Ohio form in shape.

NOTES AND NEWS.

A NEW LOCALITY FOR *PLANORBIS NAUTILUS* LINNE.—While identifying a lot of shells recently for Dr. William A. Nason of Algonquin, Illinois, a single specimen of *Planorbis nautilus* was discovered in a lot of other small Planorbis,—*parvus, albus, deflectus*. The single specimen is rather large, $2\frac{1}{2}$ mill. in diameter, and the ribs on the base of the shell, which give it its strong nautiloid appearance, are very large and distinct. The flat upper surface is also conspicuous. This habitat, Algonquin, Illinois, adds a new southern and western locality to the range of this interesting species.—FRANK COLLINS BAKER.

ERRATA.—NAUTILUS. Jan. 1906, p. 101, line 5, for "ones" read "one;" p. 101, line 7, for "Ramalley read "Ramaley."—T. D. A. COCKERELL.